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The 2001 Institutional Controls Monitoring Report for Operable Unit 3-13



Idaho National Engineering and Environmental Laboratory

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ABSTRACT

This Institutional Controls Monitoring Report documents the annual inspection specified in the Waste Area Group 3 Final Record of Decision. The Record of Decision mandated institutional controls for sites that make up Waste Area Group 3, Operable Unit 3-13 at the Idaho National Engineering and Environmental Laboratory. The Idaho Nuclear Technology and Engineering Center is designated as Waste Area Group 3. Inspections of institutional controls are required by the United States Environmental Protection Agency Region 10 to be conducted at least annually thereafter. As required by the Waste Area Group 3, Operable Unit 3-13 Record of Decision, this report fulfills the annual inspection requirement.

For the purpose of this report, the Institutional Control Plan for the Idaho Nuclear Technology and Engineering Center, Waste Area Group 3, Operable Unit 3-13 was used as the base document for the inspections. The site maps, institutional controls, and checklists used for this report are available from that document.

Representatives of the United States Department of Energy Idaho Operations Office, Environmental Protection Agency Region 10, and the Idaho Department of Environmental Quality conducted inspections of selected release sites on April 9-11, 2001. Prior to the Agency inspections, the Idaho National Engineering and Environmental Laboratory contractor performed a "pre-inspection" assessment. This Institutional Controls Monitoring Report documents the observations of these activities, using the checklists from the Institutional Control Plan.

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ACRONYMS

BBWI	Bechtel BWXT Idaho
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFLUP	Comprehensive Facilities and Land Use Plan
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EPA	U.S. Environmental Protection Agency
FFA/CO	Federal Facility Agreement/Consent Order
FR	<i>Federal Register</i>
HWMA	Hazardous Waste Management Act
IC	institutional control
ICMR	Institutional Controls Monitoring Report
ICPP	Idaho Chemical Processing Plant
ICP	Institutional Controls Plan
IDEQ	Idaho Department of Environmental Quality
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
NEPA	National Environmental Policy Act
NFA	No Further Action
NOD	Notice of Disturbance
OU	operable unit
RCRA	Resource Conservation and Recovery Act
SERG	Steele Environmental Resources Group
ROD	Record of Decision
WAG	Waste Area Group

The 2001 Annual Institutional Controls Monitoring Report for Operable Unit 3-13

1. INTRODUCTION/PURPOSE

The purpose of this Institutional Controls Monitoring Report (ICMR) is to document the annual institutional control (IC) inspection conducted for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites in Waste Area Group 3 (WAG 3), Operable Unit (OU) 3-13 at the U.S. Department of Energy (DOE)-managed Idaho National Engineering and Environmental Laboratory (INEEL). The Idaho Nuclear Technology and Engineering Center (INTEC) is designated as WAG 3, OU 3-13 and was formerly known as the Idaho Chemical Processing Plant (ICPP). An annual inspection is required by the WAG 3, OU 3-13 Final Record of Decision (ROD) (DOE-ID 1999) and the *Institutional Control Plan for the Idaho Nuclear Technology and Engineering Center, Waste Area Group 3, Operable Unit 3-13* (DOE-ID 2001). This report is intended to be used in combination with the 2001 Institutional Control Plan (ICP). Therefore the information provided in the ICP, such as site descriptions, ICs, and location maps, have not been duplicated in this report. The annual IC report is required to provide the following information:

- Results of the field inspection, including checklists and visual inspection results
- Photographs (depicting sites where actions have been taken associated with remediation, site changes, or changes in land use)
- Location maps, including survey coordinates, of each release site (depicting sites where actions have been taken associated with remediation, site changes, or changes in land use)
- Deficiencies
- Improvements.

2. INSPECTION METHODOLOGY

On April 9-11, 2001, representatives of the Department of Energy Idaho Operations Office (DOE-ID), the Environmental Protection Agency (EPA) and the Idaho Department of Environmental Quality (IDEQ) conducted an independent inspection of the WAG 3 sites. In preparation for the Agency inspection, on March 14, March 20, and April 2, 2001, inspections were conducted for all release sites requiring ICs by Bechtel BWXT Idaho, LLC (BBWI) Environmental Restoration and Steele Environmental Resources Group (SERG), Inc. These inspections used the checklists available in the IC Plan (DOE-ID 2001). The IC Plan was revised by the Agencies to include information identified by the Agencies as deficiencies based on the 2000 institutional control inspection. The following sections outline the methodology used to conduct the IC inspections.

2.1 Facility-Wide Requirements

The *INEEL Comprehensive Facilities and Land Use Plan* (CFLUP) provides guidance on facility and land use at the INEEL through the 100-year (year 2095) scenario. The CFLUP includes specific information about the INTEC facility. The ICP, which is still under development, requires the CFLUP to contain the following:

- A map based on surveyed coordinates of the institutionally-controlled release sites
- A list of required ICs for each release site
- The objective of the control or restriction
- The control or restriction
- The time frame that the restrictions apply
- A point of contact.

The CFLUP was reviewed for this inspection to determine whether the facility-wide requirements were included in the document. The CFLUP is currently in the process of being updated to a format that is intended to provide a consistent format for all INEEL ICs that may be required by the WAG RODs. The Agencies were provided an overview of the changes. This overview included the verification of the availability of the map based on surveyed coordinates of the WAG 3 sites that have ICs specified in the ROD (DOE-ID 1999), and the review of some of the sites to assess that the format contained the information identified in the preceding bullets. As the IC information is still undergoing input and review prior to release to the public, the Agency representative decided to defer the detailed review of the CFLUP to the annual 2002 IC Monitoring Report.

2.2 Results of the Field Inspection

During the field inspection, the deficiencies identified in the 2000 inspection were assessed to determine if the appropriate corrective measures were performed, in addition to the requirements and guidance provided in the IC Plan. It was determined that photographs were not required for this annual report. This is due to the lack of change in land ownership, lack of change in land use that deviated from the CFLUP, and the lack of completion of remediation at WAG 3 sites at this time. The field inspection checklists completed by Agency representatives and minutes from the kick-off and close-out meetings are provided in Appendix A. The checklists prepared by the BBWI contractor and SERG personnel in

preparation for the Agency inspection are provided in Appendix B. Table 2-1 provides a summary of deficiencies and corrective measures collected from the Agency checklists and the meeting minutes.

2.3 SUMMARY OF DEFICIENCIES AND CORRECTIVE MEASURES

Deficiencies and corrective measures were documented during the inspections and are provided in the Institutional Controls Inspection Checklist for each waste group. The regulatory Agencies additionally provided recommendations for certain aspects of the institutional controls, the Institutional Controls Plan, the Institutional Controls Inspection Checklists, and upcoming inspections. Deficiencies and corrective measures identified in the 2000 IC inspection were assessed to ensure that the appropriate corrective measures had been performed. Table 2-1 provides a summary of the deficiencies and the corrective measures to prevent further deficiencies in upcoming inspections.

Table 2-1. Summary of deficiencies and corrective measures for WAG 3, OU 3-13 institutional controls.

Deficiency Location	Deficiency Identified	Corrective Measures	Additional Recommendations or Comments
Overall inspections	<ol style="list-style-type: none"> 1. Revise inspection checklists to add a signature line for DOE-ID to the inspection checklists; change “observed boundary monuments” to “observed boundary monuments or fixed building/fence structure” as applicable. 2. Provide a discussion in the ICMP concerning the use of survey boundary marker pins versus survey points associated with permanent structures such as buildings or fences. 3. The IC inspection checklist discussion should be modified to reflect that a sample of NODs/training records will be spot-checked during the IC inspections. 4. Section 4.7.3 in the 2001 IC Plan should be modified to reflect the statement that training records will only be spot-checked. 5. Revise the IC checklist to read “evidence of unauthorized human intrusion.” This will help to eliminate confusion associated with existing or authorized intrusions at WAG 3 sites. 	During the 2002 update of the ICMP, revise as appropriate.	<ol style="list-style-type: none"> 1. Describe the work permit finalization process in the ICMP. 2. Prior to the next IC inspection, provide the Agencies with a list of all NODs completed within the year preceding the inspection. The Agencies will select several NODs (not to exceed five) from the list and notify DOE-ID of the choice at least 1 week prior to the inspection. DOE-ID will then provide the Agencies with the completed NODs, work permits, and computerized training record listing for the selected activities for review during the inspection.

Table 2-1. (continued).

Deficiency Location	Deficiency Identified	Corrective Measures	Additional Recommendations or Comments
INEEL CFLUP	Revisions are being made to the CFLUP, but document is not yet available to general public.	Make CFLUP available on the INEEL general website.	None.
Group 1 – Tank Farm Interim Action	<ol style="list-style-type: none"> 1. CPP-58 had signs on three sides/approaches. Construction prevented the posting of the fourth sign. 2. Add CPP-26 to the list of sites included in the tank farm. 	<ol style="list-style-type: none"> 1. Sign on CPP-58 will be posted following completion of construction activities. 2. Revise the ICMP as appropriate. 	<ol style="list-style-type: none"> 1. Revise the table under Item #4 (see Appendix A) to show that, within the tank farm fence, there are no survey markers and no individual site signs because the tank farm liner must be protected from holes.
Group 2 – Soils Under Buildings and Structures	CPP-41A did not have signage on one side of the site due to an equipment lay-down area. Site was surveyed and marked.	Place sign in appropriate location after lay-down area is no longer in use.	None.

Table 2-1. (continued).

Deficiency Location	Deficiency Identified	Corrective Measures	Additional Recommendations or Comments
Group 4 – Perched Water	<ol style="list-style-type: none"> 1. The ROD requires a DOE-ID directive to restrict drilling in the contaminated zone. 2. Wells PW-2, PW-4, PW-6, and USGS-50 have crumbling concrete pads around the base of the wells. 	<ol style="list-style-type: none"> 1. Evaluate whether the DOE directive on NEPA, in combination with restrictions on drilling, adequately addresses this ROD requirement. DOE-ID will provide additional information on the DOE-ID directive and the review/approval process. 2. Perform maintenance on well pads, as appropriate. 	<ol style="list-style-type: none"> 1. The Agencies will assess whether the DOE directives associated with NEPA analysis and approvals may be used in place of the DOE directive on groundwater use. Follow-on actions associated with this directive may be required, depending on the Agency determination. 2. Next year, well inspection checklists, if prepared, will be used to supplement the Agency review of Group 4 wells. During the 2002 IC inspection, the Agencies identified the need to investigate the condition of all wells providing a “conduit” to the perched water or Snake River Plain Aquifer within WAG 3.
Group 5 – Snake River Plain Aquifer	<ol style="list-style-type: none"> 1. The ROD requires a DOE-ID directive to restrict drilling in the contaminated zone. 2. Several wells were found to have potential deficiencies. These included USGS-35, USGS-47, USGS-49, USGS-52, LF2-11, LF2-12, LF3-09, LF3-10, LF3-11, and LF3-11A (see Group 5 checklists for specific details of the deficiencies). 	See corrective measures for Group 4.	See additional recommendations or comments for Group 4.

Table 2-1. (continued).

Deficiency Location	Deficiency Identified	Corrective Measures	Additional Recommendations or Comments
Group 6 – Buried Gas Cylinders	CPP-84 - Corner fence posts and signs were observed. However, no survey boundary monuments were observed.	Place the surveyed boundary monuments.	None.
Group 7 – Abandoned LRWST CPP-VES-SFE-20	None.	None.	None.
No Further Action Sites	None.	None.	None.

3. REFERENCES

CFLUP, retrieved May 25, 2001, Comprehensive Facility and Land Use Plan, Idaho National Engineering and Environmental Laboratory, U.S. Department of Energy Idaho Operations Office, Idaho Falls, Idaho, URL: <http://titanic.inel.gov:1025>.

DOE-ID, 1999, *Final Record of Decision Idaho Nuclear Technology and Engineering Center*, DOE/ID-10660, Rev. 0, U.S. Department of Energy Idaho Operations Office, U.S. Environmental Protection Agency, and Idaho Department of Health and Welfare, October.

DOE-ID, 2001, *Institutional Control Plan for the Idaho Nuclear Technology and Engineering Center, Waste Area Group 3, Operable Unit 3-13*, DOE/ID-10729, Rev. 1, U.S. Department of Energy Idaho Operations Office, U.S. Environmental Protection Agency, and Idaho Department of Health and Welfare, March.